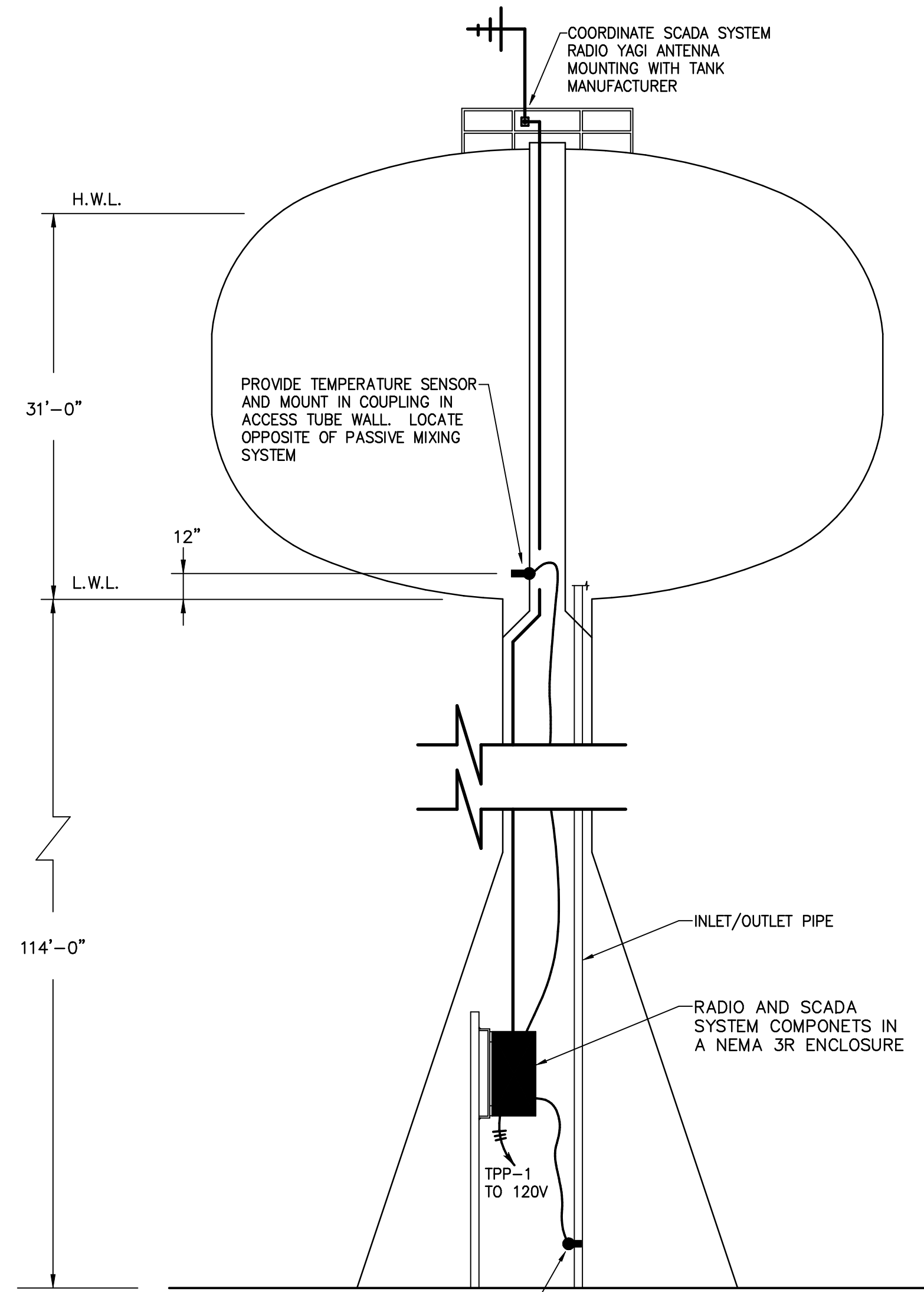


SCADA SITE PLAN  
NOT TO SCALE



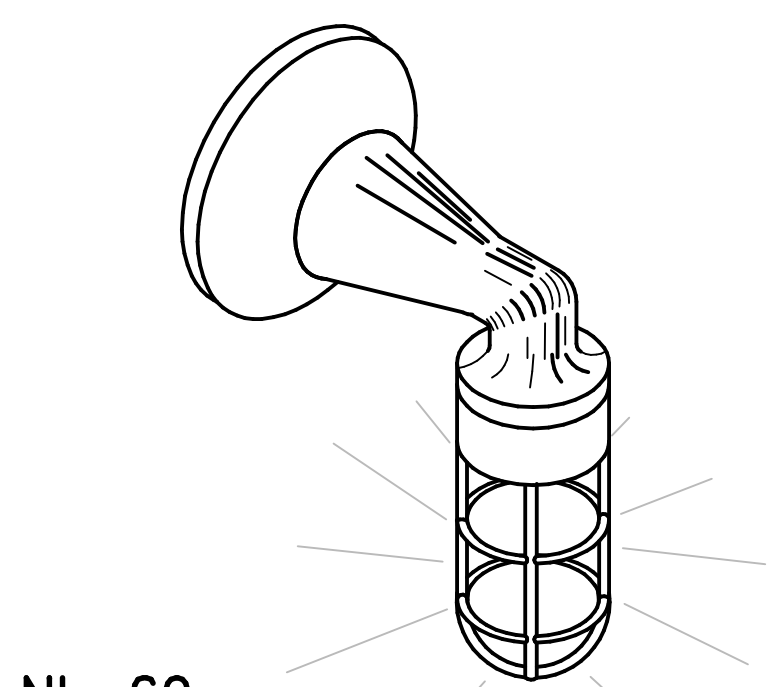
SCADA REPORTING SYSTEM LAYOUT  
NOT TO SCALE

DESIGNATION: <b>VOLTAGE:</b> 120/240V-1Ø-3W -- 100AF MIN		LOCATION: WATER TOWER BASE CONE	
TPP		FED BY: SITE ELECTRICAL DISTRIBUTION	
O.C. DEVICE: 40A M.C.B.		MINIMUM O.C. DEVICE INTERRUPTING RATING: MATCH EXISTING DISTRIBUTION	
MOUNTING: SURFACE / NEMA 3R ENCLOSURE			
Description	CKT.	O.C. AMP	P
SCADA SYSTEM	1	20	1
TOWER FLOOD LIGHTS	3		
TOWER FLOOD LIGHTS	5		
INTERIOR LED LIGHTS	7		
SPARE	9		
	11		
	13		
	15		
	17		
TOTAL KVA/Ø			

\* PROVIDE GROUND FAULT CIRCUIT INTERRUPTER

SCADA REPORTING SYSTEM NOTES:

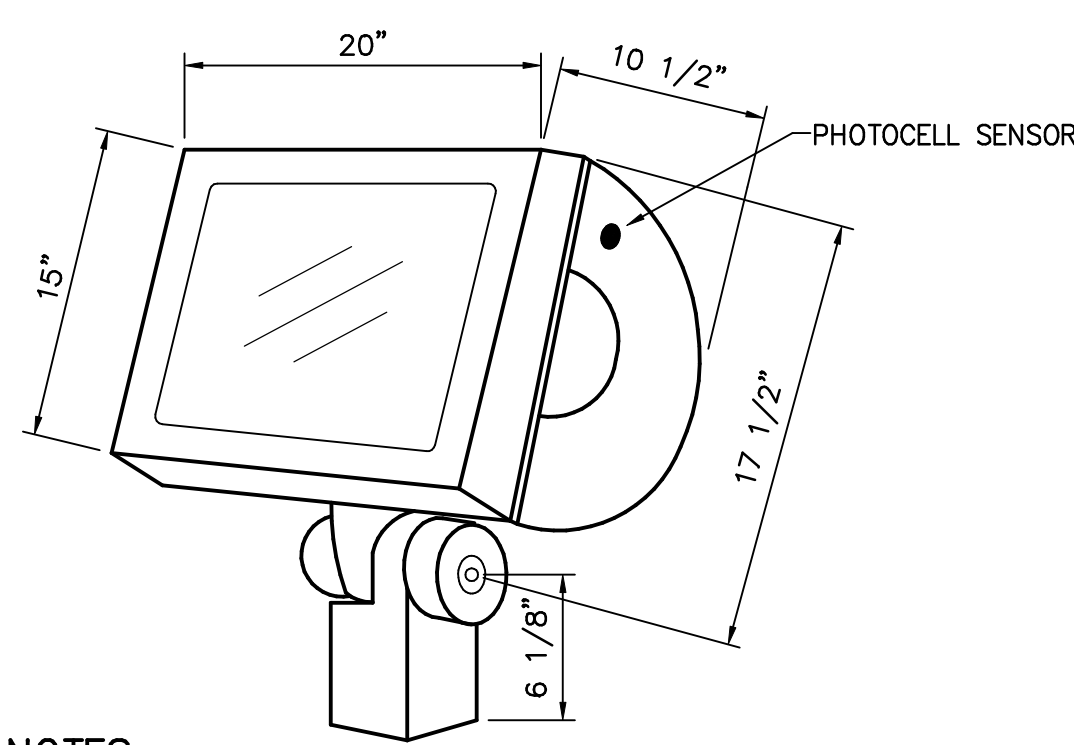
- A. RADIO:
- RADIOS ARE USED TO REGENERATE SIGNALS ACROSS A DISTANCE WIRELESSLY
  - BAND: 902-928 UNLICENSED, SPREAD SPECTRUM TECHNOLOGY
  - TYPE: FHSS
  - PROTOCOL: MODBUS RTU, MODBUS TOP OR DNP3
  - RECEIVE SENSITIVITY: -106 dBm (1 x 10-6 BER) TYPICAL
  - DATA RATE: 106 KBPS OVER-THE-AIR
  - TRANSMIT POWER: 0.1 TO 1 WATT
  - DATA COMM.: I/O CAPACITY: 1 AI, 1 AO, 2 DI, 2 DO
  - POWER SUPPLY: 4-30V DC
  - TX SUPPLY CURRENT: 450mA
  - RX SUPPLY CURRENT: 180mA
  - TEMP RANGE: -40 C TO +70 C
- B. PRESSURE SENSOR:
- RANGED 0 - 152 FT.
  - +/- 0.25% FSO STATIC ACCURACY
  - STAINLESS STEEL
  - LIGHTNING PROTECTION PROVIDED WITH LIFETIME WARRANTY ON SENSOR
- C. TEMPERATURE SENSOR ASSEMBLY CONSISTING OF:
- RESISTANCE TEMPERATURE DETECTOR RANGED FOR 20°F TO 120°F
  - ALUMINUM CONNECTION HEAD
  - 1/2" NPT FITTINGS
  - SS THERMOWELL WITH 6" INSERTION DEPTH
  - INTEGRATED TRANSMITTER WITH 4-20mA OUTPUT
- D. DUAL-INPUT PROCESS METER
- MATH FUNCTIONS: ADDITION, DIFFERENCE, AVERAGE, MULTIPLICATION, DIVISION, MIN, MAX, WEIGHTED AVERAGE, RATIO, CONCENTRATION
  - 0-20mA, 4-20mA, 0-5V, AND +/- 10V INPUTS
  - LARGE DUAL-LINE 6-DIGIT DISPLAY, 0.60" & 0.46"
  - NEMA 4X, IP65 FRONT
  - UNIVERSAL 85-265 VAC, OR 12/24 VDC INPUT POWER
  - PROGRAMMABLE DISPLAY & FUNCTION KEYS
  - 2 OR 4 RELAYS + ISOLATED 4-20mA OUTPUT
  - EXTERNAL 4-RELAY & DIGITAL I/O EXPANSION MODULES
  - USB, RS-232, RS-485 SERIAL COMMUNICATIONS
  - MODBUS RTU COMMUNICATION PROTOCOL STANDARD
- E. ACCESSORIES:
- THE FOLLOWING ACCESSORIES ARE NOTED FOR INSTALLATION OF THE RADIO LINK BETWEEN THE WATER TOWER AND THE BOILER ROOM:
- 1/2" FOAM HELIAX COAXIAL CABLE
  - GROUNDING KITS
  - PRE-ATTACHED AND WEATHER PROOFED CONNECTORS
  - CABLE HANGING KITS
  - WEATHER PROOFING KITS
  - SURGE ARRESTORS FOR RADIOS
  - DIRECTIONAL ANTENNAS - 10dB GAIN YAGI ANTENNAS WITH MOUNTING HARDWARE
  - ANY AND ALL PARTS AND COMPONENTS TO PROVIDE A FULL AND FUNCTIONING SYSTEM



NL-69  
REVISED FOR LED

- NOTES:
- ENCLOSED AND GASKETED LED FIXTURE FOR USE IN WET LOCATION.
  - CLEAR POLYCARBONATE PRISMATIC GLOBE.
  - CAST MARINE GRADE ALUMINUM FIXTURE.
  - GUARD SHALL BE CAST MARINE GRADE ALUMINUM.

FIXTURE TYPE A  
NOT TO SCALE



NOTES:

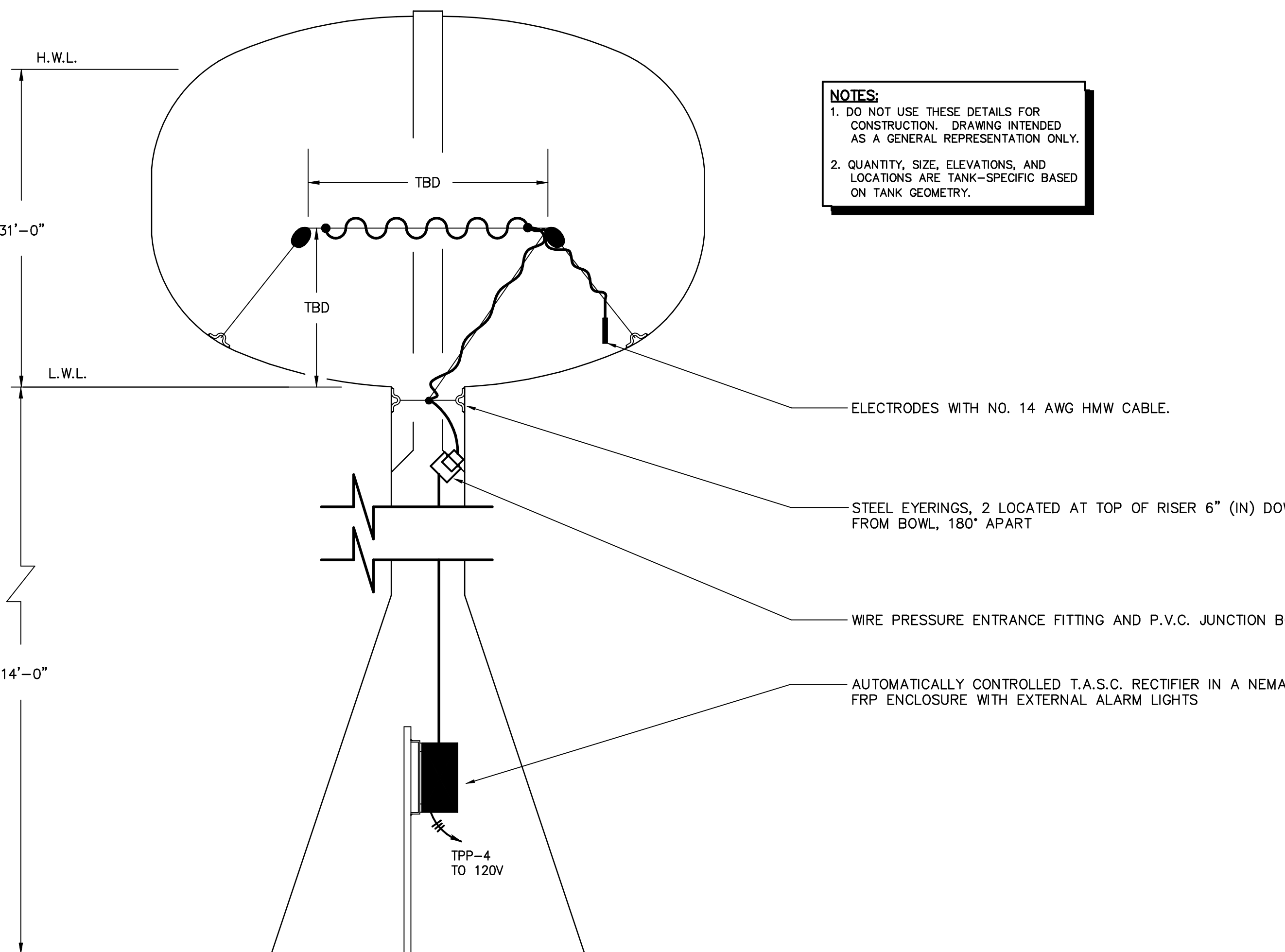
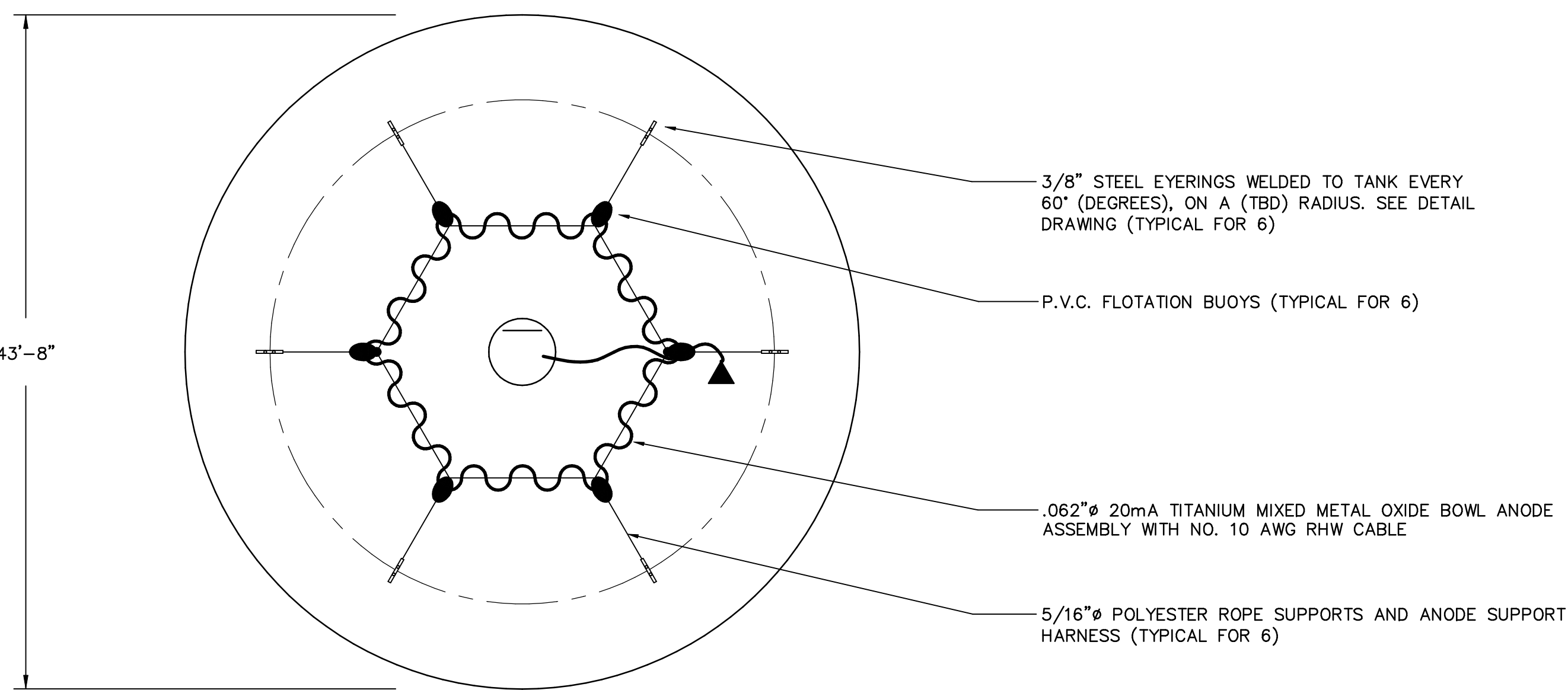
- ONE-PIECE DIE-CAST ALUMINUM HOUSING WITH INTEGRAL COOLING FINS OVER THE ENTIRE LENGTH.
- CLEAR TEMPERED GLASS LENS WITH SILICONE GASKET.
- DIE-CAST ALUMINUM DOOR WITH SILICONE GASKET AND SECURED WITH A MIN. OF 4 STAINLESS STEEL RECESSED CAPTIVE SCREWS.
- CAST ALUMINUM TWIN KNOB SWIVEL MOUNT.
- TO HAVE SIMILAR OPTIC CHARACTERISTICS AS THE BASIS OF DESIGN, THE KIM LIGHTING AFL25/400P/ED28 OR EQUAL.
- ORIENTATION AND ANGLE OF FIXTURE SHALL ACHIEVE OPTIMAL ILLUMINATION. AIM AND ADJUST ACCORDINGLY.

FIXTURE TYPE A  
NOT TO SCALE

LIGHTING FIXTURE SCHEDULE					
FIXTURE SYMBOL	DESCRIPTION	NO. & TYPE OF LAMP	VOLT	MOUNTING	NOTES
A	METALLIC LED VAPORPROOF MARINE-GRADE ALUMINUM "JELLY JAR" LIGHTING FIXTURE	LED	120	SURFACE	
A	EXTERIOR DIE CAST ALUMINUM SPOT LIGHT W/ MOUNTING SWIVEL AND INTEGRAL PHOTOCELL SENSOR FOR CONTROL	(1) 400W MH	120	SURFACE	

NOTE: SUPPLY 10% SPARE LAMPS FOR EACH TYPE OF LIGHTING FIXTURE INSTALLED

STATE DRIVE



IMPRESSED CURRENT CATHODIC PROTECTION SYSTEM LAYOUT  
NOT TO SCALE

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4115E03

ELECTRICAL DETAILS

Project Title

LEBANON VA Medical Center

CORRECT WATER TOWER DEFICIENCIES

Project Number

VA PROJ. NO. 595-11-115

Building Number(s)

Drawing Number

E-3

Date

04/13/12

Checked

DK

Drawn

G.J.D.

Dwn. 10 of 10

Department of Veterans Affairs